DOCUMENT RESUME

ED 083 708 EA 005 549

TITLE	Managing Public School Dollars.
INSTITUTION	American Inst. of Certified Public Accountants, New York, N.Y.
PUB DATE	72
NOTE	31p.
AVAILABLE FROM	American Institute of Certified Public Accountants, Inc., 666 Fifth Avenue, New York, New York 10019 ($0.75)
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Board of Education Role; Cost Effectiveness; Decision Making; Educational Change; *Educational Finance; Educational Needs; Educational Planning; *Management Information Systems; *Program Budgeting; *School Accounting; School District Spending; Systems Approach
IDENTIFIERS	Assessment; Planning Programing Budgeting System; PPBS; Program Accounting

ABSTRACT

Although this booklet focuses on methods of accumulating and analyzing management and the financial and statistical data helpful to members of school boards, equal emphasis is placed on meeting the needs of the pupil--making him more self confident, developing his skills, instilling knowledge, and inspiring creativity. It considers changes in the cost of education, the public's support of education, and the role of the school board member in meeting his responsibilities to influence education; and it discusses questions about a school's accounting system that should be examined by the school board. Other topics discussed are the use of the annual operating budget, the use of school and community demographic data in budget development, new tools for educational management, and basic suggestions to help implement program budgeting and accounting. A sample program budget is included. (Author/DN)

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MANAGING PUBLIC SCHOOL DOLLARS

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Over the years, education's share of our common resources has consistently expanded—6.6 percent of the Gross National Product six years ago, more than 8 percent today, or double the share of our national wealth that we were devoting to education as recently as the mid-fifties.

But the public purse is closing on our fingers. Last year voters approved only 47 percent of the school bond issues put before them—compared with 75 percent as recently as 1965 and 89 percent in 1960. The willingness of the people to invest their treasure unhesitatingly and unquestioningly and solely on faith for anything labeled education has come to an end. I cannot forecast when this period of stringency will end, but it is clear that whatever the level of expenditure in the days to come, the services bought will be much more closely examined than they have been and the results much more carefully evaluated.

And so they should be. To begin with, there is self-evident need for education to cut waste and get a much firmer handle on the resources at its disposal. And beyond simple economy, the people are properly demanding superior services; they are asking that classroom instruction become more individualized, more personalized, and more responsive to the needs of the young.

From a Report to Congress,
April 1972, by Dr. S. P. Marland, Jr.
United States Commissioner of Education

Many of the planning, budgeting, and evaluation techniques mentioned by Commissioner Marland are described and discussed in this booklet as a service to all who seek to expand their personal grasp of the complex, difficult, but very necessary business of getting the maximum educational benefit out of every dollar we spend on the schools. We do this in the name of economy, of course, but more fundamentally we do it for our children and in full recognition of the limitless impact that a properly managed, responsive, and accountable system of education will have on their lives.

Robert A. Nielsen, CPA

Preface

Not only because of their professional concerns but also because they are parents, taxpayers, and, in many cases, members of school boards, certified public accountants have a deep interest in public school education. CPAs appreciate the effect a school system has on a community—in particular, the effect on that system's primary clientele, children. They realize that members of school boards today face perplexing choices among alternative educational programs, that boards have to work with the resources available, and that they need realistic evaluation of results.

In 1963, the American Institute of Certified Public Accountants published a booklet, *Public School Costs,* which many people deemed useful, and which continued to be in demand almost up to the present. This new booklet not only updates the earlier one, but also describes new tools of management which board members and school administrators can use in their planning and decision-making.

This booklet was prepared for the AICPA by personnel of Peat, Marwick, Mitchell & Co., with Robert A. Nielsen, CPA, a manager in the firm and a member of the New York State Association of School Business Officials, carrying the primary responsibility.

Helpful insights and factual information were provided during the preparation by Dr. William J. Ellena, deputy executive secretary, American Association of School Administrators; Dr. Charles Foster, executive secretary, National Association of School Business Officials; Dr. Bryon W. Hansford, executive secretary, Council of Chief State School Officers; and Dr. Harold Webb, executive director, National School Boards Association.

Peter Isaacs, CPA, vice president, Larchfield Corporation; Carl G. Orne, CPA, partner, Lybrand, Ross Bros. & Montgomery; and Sam B. Tidwell, CPA, professor of accounting at Michigan Technological University, served as an advisory committee for the Institute and provided technical review of the text.

The Changing Educational Scene

In the past ten years, public school education has truly become "big business." With a marked growth in pupil population have come the needs for increased teaching personnel and additional facilities and instructional materials. In many communities, school systems are substantial employers and are the principal recipients of state and local funds. In 1969-70, $35.4 billion of state and local expenditures were for public elementary and secondary education.[1] District operating budgets, expressed in cost per student, rose on the average from approximately $315 in fiscal year 1961-62 to $703 in 1971-72, an increase of 123 percent.[2]

Larger enrollments, improvements in teacher compensation, inflation, and introduction of new programs are among the factors accounting for this sharp rise in costs; others are efforts to achieve smaller classes and a greater use of multi-media teaching techniques.

With greater emphasis on developing the whole child and preparing each pupil to begin a career upon leaving school, programs have been developed for new educators and for those engaged in retraining to help them build children's confidence and self-esteem and to enable young people to live satisfactorily in a highly technological society. Such programs, too, have increased education costs.

Even though all communities want high-quality education for their children, the mounting expenses have perturbed taxpayers, who in growing numbers of instances voted down operating budgets and bond issues for educational purposes. In fiscal 1972, over 53 percent of the bond issues submitted to public referendum were defeated at the polls, as compared with 25 percent defeated in 1965.

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[1] *Estimates of School Statistics, 1970-71,* Research Division of National Education Association.

[2] *School Management Magazine,* January 1972.

Demands have heightened for greater accountability on the part of school boards to demonstrate what is being achieved in the schools and with what degree of efficiency.

Concurrent with these developments is an increasing involvement of parents and taxpayers with school management and program content. While school board members are legally the representatives of the community, a growing number of citizens insist on participating in some fashion in the operation of the local public schools. If not handled understandingly, such insistence can confuse and hamper the educational process. On the other hand, community interest properly stimulated and directed can be a tremendous resource for achieving objectives. A board of education, for example, can arrange for local citizens to help assess community needs, assist in certain school activities on a voluntary basis, and serve as a communications link with the community at large, especially with respect to operating budgets, bond issues, and other proposals.

Community understanding and support become even more significant as new programs dealing with health, ecology, and housing for the poor and the elderly compete with traditional programs for available resources. While much is said these days about shortage of resources, often the problem is less one of volume of funds than one of increased competition for them. In 1970-71, $62 billion, or 29 percent of Federal monies, were alloted to HEW programs as compared with $41 billion, or slightly over 23 percent in 1967-68. During this period, however, the HEW dollars allocated to elementary and secondary education, while larger in absolute number, decreased from 8 percent of the agency's disbursements to a little under 7 percent.[3]

Stirrings of profound change in the financing of public schools have recently been apparent in legal decisions in California *(Serrano* v. *Priest),* Texas *(Rodriquez* v. *San Antonio School District),* and other jurisdictions. Both the California and the Texas decisions declared unconstitutional the use of local real-estate taxes as a primary source of public school financing, on the ground that the quality of public education in a state should not be a function of wealth—that is, the quality should not vary because of differences in the value of taxable real estate in different communities.

While one cannot predict the outcome of all such court tests, the review of the Rodriquez case by the United States Supreme Court makes it appear that fundamental changes will be made in methods of school financing. Every school district, if limited in its

[3]1972 Federal Budget, Office of Management & Budget, U. S. Government.

use of real-estate taxes, will have to explore alternative sources of funds and reassess its ability to finance the educational programs of the community it serves.

The Role of the Board Member

The problems facing public schools today are broad and, in many cases, difficult. But for just that reason they can be viewed as exciting challenges. In fact, if ever a school board member has had opportunity to influence education constructively, it is now. He must seek to strengthen the ability of schools in his district to impart requisite learning skills as well as to develop student attitudes and behavior conducive to betterment of the community—all within the limitations of available resources.

How can a school board member, who usually is not a professional educator and who can devote only part of his time to his public job, meet these responsibilities?

First, by relying on the district administration—superintendent, school business officials and other administrators—to direct the day-to-day activities, implement new programs and provide supervision of, and control over, all resources. This will be easier to do if the school district uses management and financial systems that not only support educational effectiveness, but also provide optimum control and utilization of the district's resources.

In instances where management processes and techniques are perhaps not what they might be, a board member must utilize existing operating systems and data while simultaneously initiating changes aimed at (1) strengthening school productivity and resource management and (2) providing the board with accurate and timely information as to the needs and priorities of the school system.

Accounting Systems and Procedures

One of the most important of a board member's responsibilities is to see to it that the school system, under the business administrator's direction, maintains adequate records of, and controls over, all

monies entrusted to it, whether they be Federal, state, or local funds, or those from student and other activities. The accounting records and reports must reflect what is actually happening and must be such as to discourage misrepresentation or misuse of funds.

A few questions about the basic elements of record-keeping and control should be answered to the board member's satisfaction before he proceeds into more complex aspects of financial management.

- **Does the district have an adequate system of internal accounting controls?**

  An internal accounting control system consists of built-in organizational checks on revenues and expenditures to assure the protection and proper use of funds and the accuracy of the accounting. It requires the use of an accounting system adapted to the particular needs of the school district and proper supervision of the system's operation. The best way to determine whether suitable controls are in effect is to obtain the advice of an experienced accountant.

- **Has the district adopted double-entry bookkeeping?**

  The use of double-entry bookkeeping is practically universal in industry, yet some school systems still account for their financial transactions by single-entry. A double-entry system is distinctly superior in that it provides a check upon the accuracy and completeness of the figures. It also results in control over assets and liabilities, because all of these find their way eventually into a general ledger which must balance. A double-entry system is also indispensable in preparing important historical financial information.

- **Are the district's accounts audited?**

  The U.S. Office of Education has stated: "It is not adequate to merely develop the budget. Of equal importance to prudent and responsible school administration is the accountability for school funds. This is achieved through school audits." Audits are made by state personnel, certified public accountants, or other qualified accountants. Where outside auditors are engaged, it is well for their appointment to be made at the beginning of the school year so that their consultation and advice may be had throughout the year.

- **How much does the school district's property cost?**

  The answer may be of more than academic interest. Where investment in building and equipment is spread over many years, the board member may find it difficult to determine whether taxpayers are paying a reasonable amount for the physical property being used in the school system. Without property accounting, some costs can easily escape notice. With it—through double-entry bookkeeping and its corollary, a controlling general ledger—the district has available information about its investment in properties. Monies are raised by long-term borrowing, the schools are built and equipped, and the property costs and liability for bonds are permanently included in the formal accounting records.

- **Is money allocated for a specific purpose actually spent for that purpose?**

  If an expenditure of any material amount is not included under the proper heading in the records, it is difficult to make valid comparisons with other school districts. For example, if one district includes all expenditures for textbooks under the cost of instruction, and another includes this cost under capital outlays, comparison of the two is meaningless.

- **What areas require special attention in the matching of revenues and related expenditures?**

  School boards generally serve as trustees of special funds: a bond issue fund, representing money borrowed for capital outlays; a fund related to the cafeteria or school lunch operations; revenue from athletic and other student activities funds. It is important to keep the cash and other assets, the liabilities, and the receipt and expenditure of these funds strictly separate from those of the school operations. Each fund should have a separate set of accounts, and separate periodic financial statements should be prepared for each. This is particularly important where some of the costs are met by special taxation or contributions: retirement funds, school lunches, or libraries.

  Appropriations for personnel costs, which may represent up to 80 percent or more of a district's operating budget, are usually made for a full school year. However, some persons

are hired at times other than the beginning of the year, and others leave and are replaced by persons at different salary levels. The combination of these factors may leave the district with uncommitted monies that can be applied to other needs. It is important that the district establish a process for identifying and reporting such monies periodically to the board and the administrators.

- **How is attention focused on the matching process?**

A district is accountable to the public and to the State Education Department for utilizing tax dollars in accordance with an approved budget. Thus the district should maintain financial records and report financial activity to the board in a form that is compatible with the approved budget and in conformity with the state's legal requirements.

Board members should be provided with summaries indicating overall revenues and expenditures, the resources still available, and deviations from budget figures and the reasons therefor. Such information should probably be supplied monthly except where special data are needed. A summary report should contain, as a minimum, the approved budget amounts, encumbrances to date, expenditures to date, and unencumbered balances or overdrafts.

To encourage school systems, including junior and community colleges, to adopt procedures capable of fully disclosing the financial position and results of operation of each fund used in financial administration, the Association of School Business Officials of the United States and Canada initiated in 1971 a *Certificate of Conformance Program for Financial Reporting by School Systems.* Annual reports are transmitted to the Association for examination by a Panel of Review. Member school systems found to be in compliance earn a Certificate of Conformance. In the event that a report does not conform substantially to the Association's recommended accounting and reporting standards, the Panel of Review will indicate ways by which it can be improved.

Since the maintenance of adequate accounting systems and procedures may place quite a burden on small school districts, some localities have brought together accounting and bookkeeping services for a number of neighboring districts. Where this is done, a local certified public accountant can help in supervising the bookkeeping and in preparing periodic financial statements.

The Annual Operating Budget

The annual operating budget is one of the most useful planning tools available to a board member. As its name indicates, it is prepared each year to show how a school system's financial resources will be allocated. The budget format commonly used is based substantially on the "functional/object" structure developed by the United States Office of Education and originally published in 1957 in *Handbook II, Financial Accounting Classification and Codes for Local and State School Systems.* This structure has been adopted in most states. A sample budget in the traditional functional/object format appears on pages 8-9.

The budget shows both revenues and expenditures. Of more concern than revenue *sources,* which can be local, state, or Federal funds, are revenue *needs,* which are determined by current operating expenditures. The expenditure classifications used in the sample budget are based on *Handbook II*'s uniform classifications: administration, instruction, attendance and health services, pupil transportation costs, operation of plant, fixed charges, capital outlays, and debt service. A board member desiring more detailed explanation of these functional classifications and the major expense codes that make up the dollar costs may obtain the data from his superintendent of schools.

Although the main purpose of any budget is planning, many school systems do not use it to that end. Too often, the budget is constructed on the basis of *resources employed* in education (personnel, supplies, textbooks) rather than of *results desired* (intellectual and occupational skills).

Implicit in this methodology is "seat-of-the-pants" decision-making, with changes being made only as crises arise or as some interest group succeeds in promoting a pet project of its own. The problems inherent in this type of "planning" are apparent. Decisions are unrelated to an overall program which, ideally, applies limited resources to what the community as a whole identifies as needs.

A more effective way for board members and administrators to use the budget as a planning tool is to establish district priorities early in the school year, before budget-preparation actually begins. Priorities are based on those needs and problems considered to deserve primary attention during the budget year. If teachers and administrators are involved in this priority-setting process, they are likely to be more committed to the results.

Exhibit A

Sample Public Schools Functional/Object Budget

	1972-73 Approved Budget		*1973-74 Recommended Budget*	
Board of Education	$ 33,020	$ 33,020	$ 35,910	$ 35,910
Central Administration				
Salaries	310,270		337,900	
Supplies and Equipment	66,159		71,400	
Other Expenses	6,500		7,125	
Total Central Administration		382,929		416,425
Instruction				
Salaries	7,286,519		7,941,305	
Textbooks	342,681		368,210	
Library Books and Audio-visual Materials	152,900		165,740	
Supplies and Equipment	557,500		605,820	
Other Expenses	82,057		77,730	
Total Instruction		8,421,657		9,158,805
Attendance and Health Services				
Salaries	66,300		71,267	
Other Expenses	16,500		16,910	
Total Attend. and Health Serv.		82,800		88,177

Pupil Transportation	475,200		526,570	
		475,200		526,570
Operation of Plant				
Salaries and Contracted Services	522,017		568,998	
Utilities	217,065		224,350	
Other Expenses	79,320		68,376	
Total Operation of Plant		818,402		861,724
Maintenance of Plant				
Salaries and Contracted Services	188,742		201,920	
Other Expenses	121,765		132,216	
Total Maintenance of Plant		310,507		334,136
Fixed Charges				
Employee Retirement	1,372,660		1,492,090	
Insurance and Judgments	418,000		408,620	
Rentals, Interest on Loans, etc.	205,796		211,101	
Total Fixed Charges		1,996,456		2,111,811
Food Services	32,750		34,800	
		32,750		34,800
Debt Service	1,094,730		1,062,720	
		1,094,730		1,062,720
Total Functional/Object Budget		$13,648,451		$14,631,078

The Superintendent might review the various priority suggestions and prepare a set of "Superintendent's Guidelines" which the board could evaluate, perhaps modify, and then approve as board policy. Subsequently, as the budget is prepared, the guidelines could serve as a basis for educational decisions. An example of a set of "Superintendent's Guidelines" appears as Exhibit B (opposite).

The budgetary process can be improved also by involving more decision-making levels in the preparation of budget requests. Rather than having the "Central Office" alone initiate and complete the district budget, principals, curriculum coordinators, and/or department chairmen—all after consultation with teachers—might develop budget requests for their respective areas of interest. These requests could then be summarized and placed in final form for board review and approval, again with the board using the guidelines as a basis for final decision-making.

In arriving at its decisions, the board will want to answer questions such as these:

- Is each child being provided equally with the best educational opportunity attainable with existing resources?
- Are resources being reasonably distributed among schools in the district in accordance with pupil population, economic and social backgrounds of pupils, and educational needs and problems?
- Should pupil-teacher ratios in the elementary and secondary schools be maintained or changed? Will a change improve the quality of education?
- Should paraprofessionals be used in the classroom? If so, what is the best "mix" of classroom teachers and paraprofessionals?
- Should paraprofessionals and clerks be used to relieve teachers of administrative detail in order to give teachers more time for planning and instruction?
- Should instruction be more individualized? Is the classroom methodology still primarily that of the lecturing teacher, or are innovative teaching methods and instructional materials being introduced? Are multi-media materials and equipment being utilized?

In many states, final budget approval does not rest with the board of education; either the public adopts the budget in a community vote or some municipal unit makes the decision. In either event, taxpayers are affected by the amount of money budgeted.

Exhibit B

Hometown Public Schools
Superintendent's Budget Guidelines For Next Year

I. Assumptions

1. Next year will be an extremely difficult budget year because of local and national economic conditions.
2. Moderate budget increases will be necessary to maintain professional and non-professional salary schedules which are competitive with comparable surrounding communities.
3. The school district will approve budget requests for all state-mandated programs.
4. Funds to provide increased community use of school facilities will be included in the budget.
5. Program improvements will incorporate differentiated staffing wherever possible.

II. Constraints

1. Continuation and improvement in all program areas will be approved only after presentation in program budgeting format.
2. Pupil/teacher ratios will not exceed present levels.
3. Increases in the current operating budget, including salaries, will not exceed 10 percent.

III. Priorities for Program Change (Random Order)

1. Institute new social studies program at all elementary schools.
2. Continue replacement program for reading materials.
3. Institute handwriting program at all elementary schools.
4. Institute revised physical education program in all schools.
5. Institute revised spelling program in all elementary schools.
6. Continue developing and implementing semesterized programs in high school.
7. Replace Levitt bleachers ($50,000).
8. Initiate special service to parochial schools.
9. Expand continuing education programs.
10. Develop and implement grounds-improvement program at all elementary schools.
11. Implement preventative maintenance program in school system.
12. Issue district newsletter on monthly basis.
13. Expand special education program for increased enrollment.
14. Provide facilities for enrollment increase of 300 pupils.
15. Expand district testing program at all levels.
16. Implement data collection system.

For this reason, and because of the importance of having the community better understand the aims of the school system, board members should involve the community in the budget preparation process.

Once adopted, an operating budget should provide the basis for controlling the level and type of spending in the school system during the year. The board must be watchful that the various items in the budget are not exceeded.

Statistical Information

Various kinds of statistical data can be very useful not only in developing a budget but in revealing trends, identifying existing or potential problems, or supporting decisions regarding facility utilization, enrollment, and so on. The type of data needed by the decision-maker will depend upon issues encountered, pupils' needs, and priorities of the school system. In asking for statistical information, a board member or administrator should first decide whether the requested data should be system-wide, or gathered by school, by program, or by some other classification.

Statistical information can help determine whether adopted board policy has been properly implemented. For example, are the schools maintaining the established teacher ratios in the different programs? Is the cost per student appropriate among schools, considering pupils' economic backgrounds and learning levels and abilities?

A statistic that a board member must constantly be aware of is enrollment, for fluctuations here affect every major facet of educational management. All too often, enrollment projections are made only for the coming year rather than for three to five years. The longer projections are essential for determining the possible future need for more or fewer classrooms, the advisability of a year-round program or of establishing regional schools.

In analyzing enrollment changes, historical data are often used, including pupil survival rates. But board members and administrators should be alert to changes in the community that have not yet manifested themselves in the historical data, such as shifts in neighborhood character, planned construction, the financial status and enrollments of private schools in the area, and sharp rises or falls in the pre-school population. An example of a method for projecting enrollment is found in Exhibit C (opposite).

Exhibit C

School District Enrollment Projections

Since projections of enrollment will influence many of the decisions made in a school district, a rather complex and sophisticated methodology could be used for these calculations. The particular items a district should consider together with a brief explanation of the mathematical process is described below.

1. Last year's enrollment.
2. Transfer rates from school to school—elementary to middle to high school.
3. Academic attrition.
4. Enrollment increase (decrease) from non-public schools.
5. Kindergarten enrollment.
6. Pupil population effect of new homes.
7. Pupil population effect of new apartments.
8. Pupil population effect of home resales.
9. Pupil population effect of apartment rerents.
10. Pupil population effect of vacant homes.
11. Pupil population effect of vacant apartment units.
12. Transfers to new schools.
13. Pupil survival rates.

For each of the items 6-11 above, there would actually be two environmental variable factors utilized in projecting enrollment; one indicating the number of housing units involved, and the other the pupil population effect per unit.

Let us see what it takes to project enrollment for a middle school. In Year 1, Hometown Middle School will have a given enrollment in grades 6, 7, and 8 (item 1 above). Step 1 is to promote 6th to 7th and 7th to 8th for Year 2, and to draw new 6th graders from those elementary schools that "feed" Hometown School (item 2). Step 2 is to deduct academic attrition (item 3) from each grade and add it back to the figure for the grade below it. Step 3 is to adjust the figures for enrollment increases (decreases) from non-public schools. Step 4 is to adjust the figures for items 6 through 11. Item 12 is used only when a new school is constructed during the planning period, and it must be populated by drawing from the enrollment of one, some, or all of the other schools (of the same level) in the district. Item 13, pupil survival rates, is used as an alternative when the user district wants to estimate the effects of items 6 through 11 without having to calculate each independently. Since these rates are nothing more than the ratio of this year's enrollment at each grade, divided by last year's enrollment at the grade immediately below it, they represent a simple alternative approach to enrollment projections.

Pupil-teacher ratios, paraprofessional-teacher ratios, and average section size are statistics that can be useful during budget preparation, especially if a school system is faced with a financial crisis. For example, by increasing these ratios, staffing patterns can be changed and the number of teachers needed in the classroom reduced. Maintaining a quality program, however, is a fundamental requirement that must not be forgotten in arriving at solutions.

Other statistical data that can be useful to board members appear in Exhibit D (pages 16-17). There are times, as during teacher negotiations or budget review, when comparative information from nearby, similar school systems may be useful. Items probably of most interest for such comparative purposes are designated in Exhibit D by an asterisk.

New Tools for Educational Management

So far this document has stressed the ways in which a board of education can utilize existing management tools and data in meeting its responsibilities; some of the newer tools available are discussed below.

Planning, Programming, Budgeting System

One management tool in which the educational community is showing considerable interest, and which now is being used in many school systems and state education departments, is the *Planning, Programming, Budgeting System* (PPBS).[4] This is a structured procedure by which a school district can improve its education program through a better understanding of community needs, combined with a determination of whether and to what extent the district is achieving desired results.

PPBS combines a district's management system-planning (a function usually carried out by the board and administrators), programming (a function of curriculum personnel), and budgeting (a responsibility of the central office) into a single integrated

[4]PPBS is sometimes called PPBES to include the word "evaluation," or ERMS, for "educational resource management system."

system with wider personnel participation and communication. PPBS elements consist of the following:[5]

- Planning—determination of a community's needs; the definition of goals, i. e., broad statements of purpose that respond to those needs; and the projection of attainments with respect to each of the objectives, which can be evaluated at a future time.
- Programming—description of how the objectives will be achieved; consideration of alternative ways to meet the objectives, including the identification of estimated costs and anticipated benefits of each; and selection of the most appropriate course of action.
- Budgeting—devising a budget to fulfill the defined programs, identifying, among other things, salaries, supplies, and other line-items incurred; basing the budget on the entire resource requirements rather than only the additional amounts over last year; and projecting the budget requirements for several years in order to obtain a long-term financial plan.
- Evaluating—reviewing the program while it is ongoing and at its conclusion to determine if the objectives are achieved; if objectives are not met, determining whether this is because of poorly stated objectives, improperly conceived programs, poor identification of problems and needs, or deficiencies of execution.

PPBS encourages involvement of school personnel at all levels and offers them opportunity to participate in the decision-making process in areas such as budget preparation, analysis, and curriculum development.

Probably a more important benefit of PPBS is that, by describing planned outcomes of the educational process in light of community needs and by choosing among programs based on their relative costs and benefits to the district, it leads to greater accountability. This consideration is probably the crux of the entire process, for while all other PPBS elements are important, the benefits of a program to the pupil are the final measure of success.

Introduction of PPBS into a school district may arouse, at least initially, apprehension and resistance on the part of some school personnel. For one reason, by enabling a district to relate program

[5]A more detailed explanation of this process appears in the American Institute pamphlet, *PPBS for Education,* and in an article appearing in the March-April 1972 issue of *Management Adviser* entitled "PPBS for a School District."

needs and available resources more closely, PPBS may indicate the desirability of a redistribution of monies among programs, with a potential reduction or even the elimination of some. Further, the use of quantified objectives and evaluations of program effectiveness might be misinterpreted by some as a device for evaluating personnel performance.

To date, there has not been sufficient time to demonstrate fully the usefulness of PPBS to school administrators and board members. The few implementations that have failed do not appear to have done so because of weaknesses in the concept, but rather because of lack of proper understanding of the techniques involved, or of failure to make proper preparation for introducing the system.

Exhibit D

Public School District Statistical Data

Statistical data which exists in some form in a school district and can be useful to board members in analyzing programs and operations are grouped below by a school district's major information components:

Pupil Data

a. Enrollment

b. Pupil dropout rate—
- number (by age bracket)
- major reason(s)

c. Average pupil load

d. Pupil contact hours (minutes)
- elementary
- secondary

e. Student achievements
- scholarships received
- college board and other national test results

f. Distribution of graduating class*
- four-year institutions of higher education
- two-year institutions of higher education
- vocational schools
- business schools
- work
- marriage
- military

Exhibit D, Continued

Staff Data

a. Number of full-time equivalent staff

b. Staff turnover
   - level of turnover
   - reasons for it

c. Pupil/staff ratio*
   - building
   - system-wide

d. Teacher/paraprofessional ratio*

e. Teacher/administrator ratio*

f. Average staff workload

Program Data

a. Average section size

b. Number of sections

c. Number of courses

d. Number of programs

Facility Data

a. Number, age, and condition of buildings

b. Number of periods per day

c. Average length of period

d. Facility utilization
   - teacher station utilization
   - student station utilization

Financial Data

a. Cost per student*
   - course or, at least, program
   - building
   - system-wide

b. Average compensation (salary plus fringe benefits)*

*Item where comparative data from other similar school districts could be useful to a board member in analysis and decision-making.

Program Budgeting

Another management tool, often confused with PPBS, is *program budgeting.* This does not employ the explicit, written objectives, the in-depth cost/benefit analysis, or the evaluation techniques that are integral parts of PPBS. It does portray, however, the school district's annual educational plan in dollars and requires the district to consider the way resources are to be allocated among programs. It leads school personnel to ask questions about program intent and to relate programming decisions to resources. Also, it provides school administrators, board members, and the community with a more lucid explanation of how taxpayers' dollars are being used and, to some degree, with what intent.

Since a program budget is essentially a planning tool that utilizes a district's normal budget preparation cycle as its vehicle, only limited additional time and effort are required to add program budgeting to a district's existing budgetary process.

Program Cost Accounting

A third management technique is *program cost accounting.* This allows a school district, through the use of cost allocation techniques, to restructure its traditional functional/object expenditures by program. Unlike PPBS or program budgeting, it does not provide for analysis of the activities themselves, nor for formal examination of their expected outcomes. Program cost accounting is not a planning tool; nevertheless, the information it produces can be quite useful in assessing the financial impact likely to result from various patterns of priorities and the costs of possible alternative programs. It can be made a component of either PPBS or program budgeting.

Program Accounting

Program accounting is a process of accumulating and reporting educational expenditures by program, in line with a program budget. This system supports either PPBS or program budgeting, and is essentially another way of accounting for transactions during the year. It differs from program cost accounting in that the latter is a technique *external* to a district's regular accounting system and is intended to recast financial data provided by the latter in order to give additional insights.

The U.S. Office of Education's *Handbook II, Financial Accounting Classification and Codes for Local & State School*

Systems, which has been the basis for school district functional/object accounting, has recently been revised to provide a basis for program accounting, and appears now under the name of *Revised Handbook II, Financial Accounting, Classifications and Standard Terminology for Local and State School Systems.* The revision, developed cooperatively with representatives of the American Institute of CPAs who served as advisors and reviewers to the national steering committee, is useful also in connection with program budgeting and PPBS. This new chart of accounts was prepared with five criteria in mind:

1. The items, accounts, and categories of information must provide the basic framework for a comprehensive system of educational *program* information.
2. The handbook design strategy must serve all sizes and types of school systems.
3. The categories of accounts must be both contractable and expandable, enabling all school districts to adapt to and support various planning, programming, budgeting, and evaluation systems.
4. Data elements must be additive into broad categories for purposes of reporting and comparing at the local, state, and Federal levels.
5. The handbook chart of accounts must conform to generally accepted governmental accounting principles.

Other Management Techniques

There are other techniques that can, in many cases, be treated as elements of the broad-based processes described above, or can be utilized separately to improve district planning and decision-making. Among these are:

- *Community-needs assessment*

  Through a variety of techniques such as task forces, attitudinal surveys, and open meetings, the district attempts to define the educational needs of the community and to establish priorities among them.

- *District-wide goals*

  After receiving inputs through various means from district personnel and the community, the district articulates specific

statements of its overall educational philosophy. These statements then provide a basis for program planning. Often, the statements are based on a community-needs assessment previously carried out.

- *Program analysis*

  This consists of an in-depth review of an existing program or emerging problem. It involves developing program goals and objectives, designing evaluation methods and criteria, and conducting cost/benefit analyses to select the most appropriate alternative activity. A key element in PPBS, it can also be undertaken independently of PPBS.

A First Step

A school district considering the use of any of the management processes outlined above should first determine what it wants to gain: Better data for decision-making? Greater involvement of school personnel and community members? Better understanding of pupil needs? A more rational method of allocating resources? A combination of these and possibly other, local, goals?

The board and district administrators must also evaluate existing resources, especially personnel, to determine the district's capabilities for implementing one or more of the techniques and the extent to which the concepts may already be employed in some form. If board members and administrators feel they do not have the time and/or available in-house expertise, they might obtain outside assistance from educational institutions, state education departments, or experienced management consultants and accountants.

In view of rising educational costs, the competition among various humanistic programs, and the growing demand for accountability, it appears that boards and administrators should initially implement those systems which support better resource allocation and program management. Thus, the implementation of program budgeting, followed by program accounting, is probably the most realistic first step.

These methodologies will provide a district with budget and expenditure data by program. They will allow the board to relate more intelligently the school's educational priorities to its program requirements and available resources. This in turn will help strengthen the board's and the administrators' decision-making

capacity and will help meet the demand for accountability. Further, by preparing the budget on a program basis, the district will involve many persons—principals, coordinators, department chairmen—in the formulation of educational plans. Finally, program budgeting and accounting will help the board communicate more effectively with the community as to how tax revenues are being employed.

An Approach To Implementation

In implementing budgeting and accounting systems, board members and key administrators should understand what the systems entail, how they work, and what specific opportunities or benefits they will bring. Because these systems, especially program budgeting, will require changes from accustomed patterns, district personnel should be kept continuously informed of the progress of implementation, and of whether and how each step affects them. It is important that adequate time be allowed for the district to adapt to the changes and for incorporating the new procedures into existing budgetary and accounting processes.

Implementing Program Budgeting

Certain key tasks are faced in implementing a program budgeting system:

1. The district must list its existing and anticipated programs in a hierarchical arrangement reflecting, as far as possible, the district's educational philosophy and the various interrelationships among programs. This listing, commonly referred to as a program structure, will serve as the basis for developing the program budget.
2. The district should recast the existing operating budget into a program format so that district personnel who will be preparing a program budget for the first time will have a concrete model of what is sought and some basis of dollar comparison. In recasting the budget (in a sense, an exercise of the cost

accounting system) the district should attempt to utilize direct program costing where feasible. For example, teacher compensation can usually be charged to specific programs on the basis of teacher work-effort. On the other hand, distribution of the costs of general instructional supplies must be based on some other appropriate method of allocation.

3. Keeping in mind what has already been noted about avoiding hastiness in scheduling change, the district should develop a budget work-program which will:
   - Identify each task to be done.
   - Designate persons responsible for each step.
   - Set target dates for initiation and completion.
4. The next step is to obtain the superintendent's budget guidelines referred to earlier. The guidelines, developed with the aid of teachers, principals, and administrators, should summarize educational priorities, environmental assumptions, and constraints for the budget year.
5. While program budgeting is not as analytical as PPBS, the forms and procedures should include:
   - A brief description of each program—major elements, enrollment projections, and so on.
   - The desired results of each—for instance, *reading* to help each pupil acquire skills necessary to read and comprehend materials of increasing difficulty and sophistication and *foreign language* to help students communicate in a foreign language and develop an awareness of and appreciation for that country's culture.
   - Written requests for program changes.
   - Identification of all program costs, including personnel.

Before personnel begin preparing budgets, the district should conduct an orientation workshop to (1) explain the purpose and benefits of program budgeting, (2) display the new forms and outline procedures, (3) assign target dates for completing budget requests, and (4) describe the review and modification process that will be followed by administrators and the board.

Once the program budget has been developed, the board and administrators should use the adopted superintendent's budget guidelines as a basis for review and modification. An example of a completed program budget is shown as Exhibit E (pages 24-5).

As a final step, the budget should be submitted to the community either for its information or for vote, depending on the district's legal requirements. Since a program format will more

easily relate budget requirements to priorities, it should give the taxpayer greater insight into the reasons why the funds are requested. Also, by relating program purposes and needs to resource requirements, the district demonstrates greater accountability to the public.

When states require districts to report the approved budget in functional/object form, the district can simply reverse the recasting process described above to convert the program budget to the required format.

Implementing Program Accounting

A district using a program budget system does not necessarily have to keep its accounts of financial transactions in the same format. It can continue accumulating costs in a functional/object format, and then periodically—perhaps quarterly until the last three months of the year—recast the expenditures by program for review and analysis. However, program accounting is a natural extension of a program budgeting system and will afford the board and administrators timely and useful information for program evaluation and supervision.

When adopting a program accounting system, a district must decide on what amount of detail and what types of reports are needed, and by whom, for proper management. For example, a principal would probably need budget and financial data by program and by major expenditure code within his school; a curriculum coordinator would receive program information by discipline (e.g., math, science) system-wide; a board member would receive a summary combination of these reports.

No less important than the content of reports is their frequency and timeliness. The data should be available as promptly after the close of a period as possible and, obviously, not later than a time when the information is still relevant and useful.

Some questions need to be considered in implementing a program accounting system.

- What modifications must be made to existing accounting code-numbers to support the program?
- Must the procedures for coding purchase orders and other transactions be modified or only the code numbers themselves?

Exhibit E

Nationwide Public Schools Program Budget

	1972-73 Approved Budget		*1973-74 Recommended Budget*	
Regular Instructional Programs				
Art	$ 353,313		$ 390,874	
Business	206,925		260,500	
Foreign Languages	552,674		546,042	
Home Economics	121,666		141,016	
Industrial Arts	234,879		232,920	
English Language Arts	1,270,441		1,350,938	
Mathematics	1,204,148		1,206,557	
Music	430,013		448,772	
Physical Education	550,993		571,403	
Reading	1,259,467		1,343,293	
Natural Science	969,849		1,042,585	
Social Studies	1,042,660		1,081,320	
Total Regular Programs		$ 8,197,028		$ 8,616,220
Special Instructional Programs				
Adult Education	41,058		42,058	
Educable Mentally Retarded	72,127		71,272	
Homebound Instruction	29,599		24,882	
Learning Disabilities	100,392		174,923	
Socially and Emotionally Disturbed	59,922		97,634	
Special Workshop	55,249		43,402	
Student Activities	22,965		23,498	
Summer School	40,721		44,145	
Trainable Mentally Retarded	90,063		90,851	
Work Study	32,934		42,756	
Total Special Programs		545,030		655,421

Pupil Support Services				
Guidance Services	277,273		278,266	
Health Services	475		549	
Psychological Services	85,665		124,259	
Social Work Services	135,335		133,393	
Speech Pathology and Audiology Services	93,165		88,329	
Visually Handicapped	10,068		10,593	
Total Pupil Support Services		601,981		635,389
Instructional Support Programs				
Library	188,726		228,262	
Instruction and Curriculum Development	143,021		174,864	
Audio-visual Services	141,858		208,850	
Total Instructional Support Programs		473,605		611,976
General Support Services				
Board of Education	6,620		12,987	
General Administration	185,421		195,307	
Data Processing Services	68,364		99,267	
School Administration	706,524		725,944	
Financial Accounting	20,445		21,389	
Operations and Maintenance of Plant	1,506,537		1,861,389	
Food Services	648,895		760,307	
Internal Services	63,435		81,110	
Pupil Transportation Services	463,046		501,157	
Health Services	25,656		40,093	
In-service Training	11,434		105,836	
Recruitment and Placement	24,749		31,590	
Total General Support Services		3,731,126		4,436,376
Total Program Budget		$13,548,770		$14,955,382

- Will the existing accounting procedures and equipment (e.g., accounting machines, computers, etc.) support the enlarged number of records and new report formats?
- Are technical staff and available time sufficient to implement the system effectively, or must outside assistance be obtained?

Installation of the new system should be planned to extend over a long enough period so that the component tasks are not rushed and that the job can be substantially completed by the first day of the new school year. Where new elements of mechanization are required, especially use of a computer, the new system should run for a while in parallel with the existing one. As a general rule, the parallel operations should continue at least until the first set of reports has been produced and reviewed.

Conclusion

Although focused on methods of accumulating and analyzing management, financial, and statistical data that can be of help to members of school boards, this booklet has been written in the full consciousness that the concerns of boards of education are not limited to the dollars spent in their respective school systems. Equal or greater emphasis is placed on meeting the needs of the pupil: making him more self-confident, developing his skills, instilling knowledge, and inspiring creativity. The foregoing observations are offered in the conviction that the tools described for planning, and for coordinating educational needs with available resources, are germane to those larger ends.